

REMARKS

Main claim 23 has been amended by limiting its scope to an optical cross-connect wherein “each signal shaping unit is operative for regenerating the optical signal received at its input port”. Basis for this amendment can be found in paragraph 23 of the published application.

The Examiner held that the signal shaping unit disclosed by Graves is the wavelength converting switch 14. There is nothing, however, disclosed in, or suggested by, Graves that the wavelength converting switch 14 can *regenerate* optical signals.

In fact, Graves fails to explain how the wavelength converting switch 14 works. The disclosure is limited to the drawing showing a box with inputs and outputs, some of which are used for add and drop functions. The description of element 14 does not reveal further details.

Any wavelength conversion that may be performed in the wavelength converting switch 14 is *not* regeneration, because regeneration uses the *same* wavelength at the input and the output of the regenerating device. The objective of regeneration is to receive, at the output, the same signal (i.e., the same wavelength and the same data transmitted) as at the input, but of a better quality than at the input (e.g., less noise). Graves fails to disclose all the features of the amended claim 23 and, therefore, claim 23 is novel and unobvious in view thereof.

Dependent claim 24 has been amended by clarifying that each signal shaping unit shapes “only one” communication signal. Basis for this amendment can be found in Fig. 3, wherein each of the elements T1 - TQ receives only one signal. See, also, paragraph 24 of the published application for further basis.

New dependent claim 31 has been added to recite that each signal shaping unit comprises a photodiode, an electrical circuit, and a fixed wavelength laser diode for regenerating the

optical communication signal. Basis for this new claim can be found in paragraph 23 of the published application.

Wherefore, a favorable action is earnestly solicited.

Respectfully submitted,

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